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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,231	07/21/2004	Karsten Bo Rasmussen	66722-055-7	3553
25269	7590	03/13/2006	EXAMINER	
DYKEMA GOSSETT PLLC FRANKLIN SQUARE, THIRD FLOOR WEST 1300 I STREET, NW WASHINGTON, DC 20005			LE, HUYEN D	
			ART UNIT	PAPER NUMBER
			2646	

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/501,231	Applicant(s) RASMUSSEN ET AL.	
	Examiner HUYEN D. LE	Art Unit 2646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 and 6-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 and 6-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

1. Claim 6 is objected to because of the inconsistency: in claim 6, line 9, before “transducer”, --further-- should be inserted. Appropriate correction is required.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the further transducer being provided by a sound inlet opening at a wind noise protected location and the further transducer being provided a wind screen must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

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be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not disclose that the further transducer is provided as a MEMS produced microphone on a chip having electric circuitry thereon.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. Claims 2 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Killion et al. (U.S. patent 5,524,056).

Regarding claim 6, Killion teaches a method and apparatus of a hearing aid with one primary sound to electric converting transducer (15, 440, figures 1, 6, 16, 18) and a further sound to electrical transducer (20, 445, 450, figures 1, 8, and 17-20), an electrical to sound transducer (col. 11, lines 14-16), and a signal processing unit (60, 170) as claimed.

Killion further teaches the sensitivity to noise of the further transducer that is smaller than the sensitivity to noise of the primary transducer (col. 3, lines 23-32). The reduced wind noise sensitivity of the further transducer is provided by placing a sound inlet opening (400, 400', 415, 415') of the further transducer (445, 450) at a wind protected location (col. 4, lines 10-15, and col. 11, lines 47-57, also see figure 19). The signal processing unit that has means for detecting the level of the noise in the signal from the primary transducer (col. 7, lines 32-35 and lines 55-67 through col. 8, lines 1-7), and means (150, 155) for selecting the signal to be amplified from either the primary transducer or the further sound transducer.

Killion does not specifically teach that the noise or ambient noise level is wind noise. However, Killion does not restrict to any type of noise.

Therefore, it would have been obvious to one skilled in the art to detect any type of noise in the ambient noise of the Killion device such as wind noise for the same desired purpose of detecting the noise level in the system.

Regarding claims 2 and 8, Killion does not specifically teach the further transducer that is provided as a MEMS produced microphone on a chip as claimed. However, providing a MEMS microphone for an audio device is known in the art.

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Since Killion does not restrict any specific type of the microphone; it therefore would have been obvious to one skilled in the art to provide any type transducer for the microphone (15, 20) of Killion such as a MEMS microphone depending on the applications or the type of the hearing aid device.

Regarding claim 7, Killion teaches a method and apparatus of a hearing aid with one primary sound to electric converting transducer (15, 440, figures 1, 6, 16, 18) and a further sound to electrical transducer (20, 445, 450, figures 1, 8, and 17-20), an electrical to sound transducer (col. 11, lines 14-16), and a signal processing unit (60, 170) as claimed.

Killion further teaches the sensitivity to noise of the further transducer that is smaller than the sensitivity to noise of the primary transducer (col. 3, lines 23-32). The reduced wind noise sensitivity of the further transducer is provided by the use of a wind screen (485, col. 4, lines 13-15, and col. 11, lines 54-57, also see figure 19). The signal processing unit that has means for detecting the level of the noise in the signal from the primary transducer (col. 7, lines 32-35 and lines 55-67 through col. 8, lines 1-7), and means (150, 155) for selecting the signal to be amplified from either the primary transducer or the further sound transducer.

Killion does not specifically teach that the noise or ambient noise level is wind noise. However, Killion does not restrict to any type of noise.

Therefore, it would have been obvious to one skilled in the art to detect any type of noise in the ambient noise of the Killion device such as wind noise for the same desired purpose of detecting the noise level in the system.

Response to Arguments

6. Applicant's arguments filed 12/20/05 have been fully considered but they are not persuasive.

Responding to the arguments about that Killion et al. do not disclose the possibility of locating one microphone opening at a place on the hearing aid wherein the wind noise is limited, the examiner has explained in detail in the Office Action (also see col. 4, lines 10-15, and col. 11, lines 47-57, and figure 19 in the Killion reference).

Responding to arguments about that Killion et al. do not disclose the possibility of switching between a microphone with a wind screen covered opening and one without a wind screen dependent on the wind load experience, the Applicant should note that this limitation are not included in claims 2, and 6-8. As broadly claimed, Killion shows a wind screen (485, figure 19) for the reduced wind noise sensitivity of the further transducer (445, 450).

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUYEN D. LE whose telephone number is (571) 272-7502. The examiner can normally be reached on 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, SINH TRAN can be reached on (571) 272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



HL
March 6, 2006



HUYEN LE
PRIMARY EXAMINER